

EX-1

EXHIBIT 1

PACKAGE INSERT

# ESTROSTEP® (Norethindrone Acetate and Ethinyl Estradiol Tablets, USP)

## ESTROSTEP® 21

(Each white triangular tablet contains 1 mg norethindrone acetate and 20 mcg ethinyl estradiol; each white square tablet contains 1 mg norethindrone acetate and 30 mcg ethinyl estradiol; each white round tablet contains 1 mg norethindrone acetate and 35 mcg ethinyl estradiol.)

## ESTROSTEP® Fe

(Each white triangular tablet contains 1 mg norethindrone acetate and 20 mcg ethinyl estradiol; each white square tablet contains 1 mg norethindrone acetate and 30 mcg ethinyl estradiol; each white round tablet contains 1 mg norethindrone acetate and 35 mcg ethinyl estradiol; each brown tablet contains 75 mg ferrous fumarate.)

Patients should be counseled that this product does not protect against HIV infection (AIDS) and other sexually transmitted diseases.

### DESCRIPTION

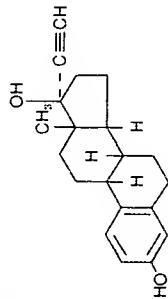
Estrostep is a graduated estrophasic providing estrogen in a graduated sequence over a 21-day period with a constant dose of progestogen.

Estrostep 21 provides for a 21-day dosage regimen of oral contraceptive tablets.

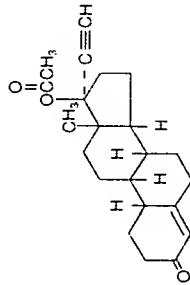
Estrostep Fe provides for a continuous dosage regimen consisting of 21 oral contraceptive tablets and seven ferrous fumarate tablets. The ferrous fumarate tablets are present to facilitate ease of drug administration via a 28-day regimen, are non-hormonal, and do not serve any therapeutic purpose.

Each white triangle-shaped tablet contains 1 mg norethindrone acetate [(17 $\alpha$ )-17-(acetyloxy)-19-norpregna-4-en-20-yn-3-one] and 20 mcg ethinyl estradiol [(17 $\alpha$ )-17-(acetyloxy)-1,3,5(10)-trien-20-yn-3,17-diol]; each white square-shaped tablet contains 1 mg norethindrone acetate and 30 mcg ethinyl estradiol; and each white round tablet contains 1 mg norethindrone acetate, 35 mcg ethinyl estradiol, and each white round tablet contains calcium stearate, lactose, microcrystalline cellulose, and starch.

The structural formulas are as follows:



Ethinyl Estradiol



Norethindrone Acetate

Each brown tablet contains microcrystalline cellulose; ferrous fumarate; magnesium stearate; povidone; sodium starch glycolate; sucrose with modified dextrins.

Each Estrostep 21 tablet dispenser contains five white triangular tablets, seven white square tablets, and one white round tablet. *When used as directed, this product is safe and effective.*

The information contained in this package insert is principally based on studies carried out in patients who used oral contraceptives with higher formulations of estrogens and progestogens than those in common use today. The effect of long-term use of the oral contraceptives with lower formulations of both estrogens and progestogens remains to be determined.

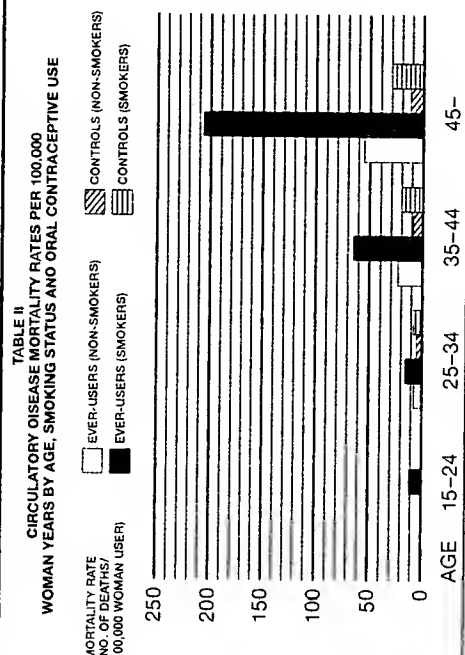
Throughout this labeling, epidemiological studies reported are of two types: retrospective or case control studies and prospective or cohort studies. Case control studies provide a measure of the relative risk of a disease, namely, a ratio of the incidence of a disease among oral contraceptive users to that among nonusers. The relative risk does not provide information on the actual clinical occurrence of a disease. Cohort studies provide a measure of attributable risk, which is the difference in the incidence of disease between oral contraceptive users and nonusers. The attributable risk does provide information about the actual occurrence of a disease in the population (adapted from References 8 and 9 with the authors' permission). For further information, the reader is referred to a text on epidemiological methods.

### 1. Thromboembolic Disorders and Other Vascular Problems

#### a. Myocardial Infarction

An increased risk of myocardial infarction has been attributed to oral contraceptive use. This risk is primarily in smokers or women with other underlying risk factors for coronary artery disease such as hypertension, hypercholesterolemia, morbid obesity, and diabetes. The relative risk of heart attack for current oral contraceptive users has been estimated to be two to six (10-16). The risk is very low under the age of 30.

Smoking in combination with oral contraceptive use has been shown to contribute substantially to the incidence of myocardial infarctions in women in their mid-thirties or older with smoking accounting for the majority of excess cases (17). Mortality rates associated with circulatory disease have been shown to increase substantially in smokers over the age of 35 and non-smokers over the age of 40 (Table II) among women who use oral contraceptives.



Oral contraceptives may compound the effects of well-known risk factors, such as hypertension, diabetes, hyperlipidemias, age and obesity (19). In particular, some progestogens are known to decrease HDL cholesterol, and cause glucose intolerance, while estrogens may create a state of hyperinsulinism (20-24). Oral contraceptives have been shown to increase blood pressure among users (see Section 9 in WARNINGS). Similar effects on risk factors have been associated with an increased risk of heart disease. Oral contraceptives must be used with caution in women with cardiovascular disease risk factors.

#### b. Thromboembolism

An increased risk of thromboembolic and thrombotic disease associated with the use of oral contraceptives is well established. Case control studies have found the relative risk of users compared to nonusers to be 3 for the first episode of superficial venous thrombosis, 4 to 11 for deep vein thrombosis or pulmonary embolism, and 1.5 to 6 for women with predisposing conditions for venous thromboembolic disease (9,10,25-30). Cohort studies have shown the relative risk to be somewhat lower, about 3 for new cases and about 4.5 for new cases requiring hospitalization (31). The risk of thromboembolic disease due to oral contraceptives is not related to length of use and disappears after pill use is stopped (8).

A two- to four-fold increase in relative risk of postoperative thromboembolic complications has been reported with the use of oral contraceptives (15,32). The relative risk of venous thrombosis in women who have predisposing conditions is twice that of women without such medical conditions (15,32). If feasible, oral contraceptives should be discontinued at least 4 weeks prior to and for 2 weeks after elective surgery of a type associated with an increase in

## ESTROSTEP® 21 (Norethindrone Acetate and Ethinyl)

## ESTROSTEP® Fe (Norethindrone Acetate and Ethinyl and Ferrous Fumarate Tablets)

\*Ferrous fumarate tablets are not USP.

Studies from Britain have shown an increased (58-60) in long-term (>8 years) oral contraceptive use in the U.S., and the attributable risk (the contraceptive users approaches less than one per

### 5. Ocular Lesions

There have been clinical case reports of retinal lesions. Oral contraceptives should be discontinued if there is persistent or progressive loss of vision, onset of proptosis or scotomata, or appropriate diagnostic and therapeutic lesions.

**6. Oral Contraceptive Use Before and After Menstruation**  
Extensive epidemiological studies have revealed no increased risk of endometrial cancer in women who have used oral contraceptives prior to the menarche. However, there is a small, non-significant increase in relative risk of endometrial cancer in women who have used oral contraceptives for 10 years or more, particularly in those with a history of prolonged use. The administration of oral contraceptives to women as a test for pregnancy. Oral contraceptives should be discontinued if there is persistent or progressive loss of vision, onset of proptosis or scotomata, or appropriate diagnostic and therapeutic lesions.

**7. Gallbladder Disease**  
Earlier studies have reported an increased likelihood of gallbladder disease in women who use oral contraceptives and estrogens (66,67). The relative risk of developing gallbladder disease is increased in women who use oral contraceptives (68-70). The recent findings of minimal gallbladder disease in women who use oral contraceptives containing lower hormone levels are consistent with the findings of minimal gallbladder disease in women who use oral contraceptives.

**8. Carbohydrate and Lipid Metabolic Effects**  
Oral contraceptives have been shown to cause changes in carbohydrate and lipid metabolism. Oral contraceptives contain hyperinsulinism, while lower doses of estrogen have been shown to increase insulin secretion and create insulin resistance (23,72). However, in the presence of hyperinsulinism, the effect of oral contraceptives on blood glucose levels is not clear. Oral contraceptives should be used with caution in women with diabetes, particularly in those with a history of hyperglycemia or diabetic retinopathy.

**9. Elevated Blood Pressure**  
An increase in blood pressure has been reported and this increase is more likely in older oral contraceptive users (74). Data from the Royal College of General Practitioners have shown that the incidence of hypertension is increased in women who use oral contraceptives. Women with a history of hypertension or hyperlipidemia should be encouraged to use another method of contraception. Oral contraceptives should be discontinued if there is a persistent increase in blood pressure or if there is a history of hypertension among oral contraceptive users.

A small proportion of women will have persistent hypertension (see WARNINGS 1a, and 1d). Oral contraceptives should be discontinued if there is a persistent increase in blood pressure.

**10. Headache**  
The onset or exacerbation of migraine or development of new or worse headaches during the use of oral contraceptives is recurrent, persistent, or severe requires discontinuation of the drug.

**11. Bleeding Irregularities**  
Breakthrough bleeding and spotting are some of the most common side effects of oral contraceptives, especially during the first three months of use.